

--38/ A method according to claim 26, wherein the decoration layer is a layer of ink deposited by printing on the layer of varnish before the varnish is exposed to said radiation.--

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B
cont'd*
--39/ A method according to claim 33, wherein the varnish includes photo-initiators at a concentration by weight of about 0.5%.--

--40/ A method according to claim 30, wherein the oligomers have molecular weight lying in a range from about 800 to about 2000.--

--41/ A method according to claim 26, wherein the article is made out of plastics material.--

REMARKS

Claims 1-22 and 24-41 are pending herein. By this Amendment, claims 1 and 24 are amended, claim 23 is canceled, and claims 26-41 are added.

No new matter is added by this Amendment. Support for the amendment to claim 1 to recite that the varnish layer and the transfer layer both remain on an external surface of the article after the transfer, as well as for new claim 26 reciting that the decoration layer remains coherent after the transfer on the article, may be found in the original specification at least at, for example, Figures 3 and 4 and page 5, line 32 to page 6, line 17.

The attached Appendix includes a marked-up copy of each rewritten claim (37 C.F.R. §1.121(c)(1)(ii)).

I. Rejection Under 35 U.S.C. §102(b)

Claims 1, 2, 4-9, 13-15, 19 and 20 were rejected by the Patent Office under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 4,294,641 to Reed et al. (hereinafter "Reed"). The rejection is respectfully traversed.

Reed describes a heat transfer material that is primarily intended for use in applying designs to textiles. The transfer material comprises a flexible carrier sheet bearing a transfer layer of a polymer composition that is rendered non-blocking at normal room temperatures

by a particulate solid dispersed therein. The particulate solid is selected so that at the melting temperature of the layer, it is either removed completely by sublimation or is converted to a form that does not interfere with liquid phase transfer of the design to the textile. See the Abstract.

A. Claim 1 and Claims Dependent Therefrom

Reed differs from the invention recited in claim 1, and fails to anticipate the hot marking method of claim 1. Reed in fact teaches directly against the method of claim 1, and thus also fails to suggest the claimed method to one of ordinary skill in the art.

Reed fails to anticipate the invention of claim 1 because Reed fails to describe, either explicitly or implicitly, each and every aspect of the claimed invention. In particular, present claim 1 recites a hot marking method enabling decoration to be made on an article. The method comprises:

supplying a multilayer structure comprising a layer of varnish that hardens under the effect of radiation, a backing layer, and a layer of decoration, the varnish layer being situated between the backing layer and the decoration layer;

bringing said multilayer structure into contact with the article;

applying pressure and heat to the backing layer at a location where it is desired to transfer the decoration layer onto the article, the varnish layer being transferred locally onto the article together with the decoration layer;

withdrawing the backing layer; and

causing the layer of varnish that has been transferred onto the article to harden by exposing it to said radiation,

wherein the varnish layer and the decoration layer both remain on an external surface of the article after the transfer.

Reed, on the other hand, discloses a heat transfer material to be used in painting textiles. The substrates in Reed on which the transfer layer is to be deposited are absorbent by reason of their fibrous or cellular structure. See column 3, lines 39-40 of Reed. As a result, the transfer material flows into the substrate. See column 5, lines 57-58 of Reed. Thus, after the transfer in Reed, the transfer layer does not remain on an external surface of the article, contrary to the requirement of the invention as defined in claim 1. Reed thus fails to anticipate the method of claim 1 for at least this reason.

Moreover, Reed specifically excludes solid state transfers that "produce a decorated substrate in which the transfer layer exists as a film or skin on the surface of the substrate." See Reed at column 3, lines 46-55. Reed describes such solid state transfer as undesirably altering the physical properties of the substrate such as porosity and surface texture and undesirably producing a label like effect. As such, Reed plainly teaches against the method of claim 1 that requires the varnish layer and decoration layer to both remain on an external surface of the article after the transfer. Reed should not be found to teach or suggest the method of claim 1 for this additional reason.

B. Claim 26 and Claims Dependent Therefrom

Reed differs from the invention recited in claim 26, and fails to anticipate the hot marking method of claim 26. Reed also teaches directly against the method of claim 26, and thus also fails to teach or suggest the claimed method to one of ordinary skill in the art.

Reed fails to anticipate the invention of claim 26 because Reed fails to describe, either explicitly or implicitly, a hot marking method as recited in claim 26 and in which the decoration layer remains coherent after the transfer on the article.

As stated at column 3, lines 46-55, and as discussed above, Reed excludes transfer in the solid state in which the transfer layer is retained as a coherent film during and after heat

transfer. Reed describes such solid state transfer as producing a label like effect that is not desired.

Thus, in Reed, the transfer layer does not remain coherent after transfer. Reed thus fails to anticipate the method of claim 26 for at least this reason. Moreover, as Reed specifically excludes solid state transfers, Reed plainly teaches against the method of claim 26 that requires the decoration layer to remain coherent after the transfer on the article.

For the foregoing reasons, Reed should not be found to teach or suggest the method of claim 26.

C. Conclusion

Thus, for the foregoing reasons, Applicant submits that Reed cannot be found to anticipate the present invention of claims 1 and 26 and claims dependent therefrom. Reconsideration and withdrawal of the rejection are respectfully requested.

II. Rejections Under 35 U.S.C. §103(a)

A. Relying Upon Reed

Claims 11, 21 and 23-25 were rejected under 35 U.S.C. §102(a) as allegedly being obvious over Reed. The rejection is respectfully traversed.

For all the same reasons set forth extensively above in addressing the rejection under 35 U.S.C. §102(b) relying upon Reed, Applicant submits that Reed would not have rendered the methods of claims 1 and 26 obvious to one of ordinary skill in the art.

Contrary to the reasoning set forth in the Office Action, Reed, at column 3, lines 46-55, specifically teaches against the methods of claims 1 and 26 as discussed above. As such, one of ordinary skill in the art would not have been led to the claimed methods, but instead would have been led away from the claimed methods, by the teachings of Reed. It is axiomatic that a reference that expressly teaches away from a claimed invention, as in the

present case with Reed, cannot be found to render the claimed invention obvious. Rather than suggesting the claimed invention, Reed suggests against the claimed invention.

Thus, Applicant respectfully submits that Reed also cannot be found to have rendered obvious any claims of the present application. Reconsideration and withdrawal of this rejection are respectfully requested.

B. Relying Upon Reed in View of Hekal

Claim 3 was rejected under 35 U.S.C. §103(a) as allegedly being obvious over Reed in view of U.S. Patent No. 5,581,978 to Hekal et al. (hereinafter "Hekal"). The rejection is respectfully traversed.

As set forth extensively above, Reed fails to teach or suggest a hot marking method "wherein the varnish layer and the decoration layer both remain on an external surface of the article after the transfer" as in claim 1 or "wherein the decoration layer remains coherent after the transfer on the article" as in claim 26.

Hekal fails to remedy the deficiencies of Reed. Hekal was merely relied upon by the Patent Office as allegedly teaching materials that work well for UV curable overcoatings including acrylated urethanes, two part epoxy and urethane systems and cationic systems.

However, nowhere does Hekal teach or suggest a hot marking method "wherein the varnish layer and the decoration layer both remain on an external surface of the article after the transfer" as in claim 1 or "wherein the decoration layer remains coherent after the transfer on the article" as in claim 26. Moreover, nothing in Hekal teaches or suggests ignoring the direct teachings of Reed not to have the transfer layer remain on the external surface of the substrate and not to have such transfer layer remain coherent after transfer.

Thus, for the foregoing reasons, Applicant submits that Reed and Hekal, whether taken singly or in combination, fail to teach or suggest the present invention. Reconsideration and withdrawal of the rejection are respectfully requested.

C. Relying Upon Reed in View of Howard

Claim 22 was rejected under 35 U.S.C. §103(a) as allegedly being obvious over Reed in view of U.S. Patent No. 4,133,723 to Howard (hereinafter "Howard"). The rejection is respectfully traversed.

Howard also fails to remedy the deficiencies of Reed. Howard was relied upon by the Patent Office as allegedly teaching that acrylated urethane oligomers having molecular weights ranging from 410 to 1000 are useful in forming radiation curable coatings.

However, nowhere does Howard teach or suggest a hot marking method "wherein the varnish layer and the decoration layer both remain on an external surface of the article after the transfer" as in claim 1 or "wherein the decoration layer remains coherent after the transfer on the article" as in claim 26. Moreover, nothing in Howard teaches or suggests ignoring the direct teachings of Reed not to have the transfer layer remain on the external surface of the substrate and not to have such transfer layer remain coherent after transfer.

Thus, for the foregoing reasons, Applicant submits that Reed and Howard, whether taken singly or in combination, fail to teach or suggest the present invention.

Reconsideration and withdrawal of the rejection are respectfully requested.

D. Relying Upon Reed in View of Süss and Vilaprinyo Oliva

Claims 10, 12 and 16-18 were rejected under 35 U.S.C. §103(a) as allegedly being obvious over Reed in view of U.S. Patent No. 6,059,914 to Süss (hereinafter "Süss") and U.S. Patent No. 4,215,170 to Vilaprinyo Oliva (hereinafter "Vilaprinyo Oliva"). The rejection is respectfully traversed.

Süss fails to remedy the deficiencies of Reed. Süss was relied upon by the Patent Office as allegedly teaching substituting metal layers for pigmented color layers and to utilize a layer of hot-melt adhesive thereover where the design layer does not have suitable adhesive properties.

However, Süss also fails to teach or suggest a hot marking method "wherein the varnish layer and the decoration layer both remain on an external surface of the article after the transfer" as in claim 1 or "wherein the decoration layer remains coherent after the transfer on the article" as in claim 26. Moreover, nothing in Süss teaches or suggests ignoring the direct teachings of Reed not to have the transfer layer remain on the external surface of the substrate and not to have such transfer layer remain coherent after transfer.

Vilaprinyo Oliva fails to remedy the deficiencies of Reed and Süss. Vilaprinyo Oliva was merely relied upon by the Patent Office as allegedly teaching that vacuum metalization is a known process for forming a metallized layer on multiplayer transfer structures. However, like Reed and Süss, Vilaprinyo Oliva fails to teach or suggest a hot marking method "wherein the varnish layer and the decoration layer both remain on an external surface of the article after the transfer" as in claim 1 or "wherein the decoration layer remains coherent after the transfer on the article" as in claim 26. Moreover, nothing in Vilaprinyo Oliva teaches or suggests ignoring the direct teachings of Reed not to have the transfer layer remain on the external surface of the substrate and not to have such transfer layer remain coherent after transfer.

Thus, for the foregoing reasons, Applicant submits that Reed, Süss and Vilaprinyo Oliva, whether taken singly or in combination, fail to teach or suggest the present invention. Reconsideration and withdrawal of the rejection are respectfully requested.

III. Conclusion

In view of the foregoing amendments and remarks, Applicant submits that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-22 and 24-41 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance, the Examiner is invited to contact Applicant's undersigned representative at the telephone number set forth below.

Respectfully submitted,



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Attachment:
Appendix

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<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>
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APPENDIX

Changes to Claims:

Claim 23 is canceled.

Claims 26-41 are added.

The following is a marked-up version of the amended claims:

1/ (Twice Amended) A hot marking method enabling decoration to be made on an article, comprising:

- supplying a multilayer structure comprising a layer of varnish that hardens under the effect of radiation, a backing layer, and a layer of decoration, the varnish layer being situated between the backing layer and the decoration layer;
- bringing said multilayer structure into contact with the article;
- applying pressure and heat to the backing layer at a location where it is desired to transfer the decoration layer onto the article, the varnish layer being transferred locally onto the article together with the decoration layer;
- withdrawing the backing layer; and
- causing the layer of varnish that has been transferred onto the article to harden by exposing it to said radiation,

wherein the varnish layer and the decoration layer both remain on an external surface of the article after the transfer.

24/ (Amended) A method according to claim 1, wherein the decoration layer remains coherent after during the transfer on the article.